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To: Robin Kinser **Date:** October 25, 2000
From: Kathy Mitchell
Subject: Literature Search: Cadmium in Blood in Smokers versus Non-Smokers

Files Searched: Medline (Dialog File 155) 1966 - 10/2000

The library collection was reviewed for books on the comparison of cadmium levels in blood of smokers compared to non-smokers (Attachment 1).

One of the most indepth sources in our collection is Cadmium and health : a toxicological and epidemiological appraisal. (Friberg, Lars et. al., editors Boca Raton, Fla. : CRC Press, 1985) Friberg devotes a chapter (Chapter 2 Principles and Problems of Cadmium Analysis) to the difficulties in evaluating published reports. "Normal Values for Cadmium in Human Tissues, Blood, and Urine in Different Countries" is the subject of review in Chapter 5. In Table 1 "Cadmium in Blood in Humans not Occupationally Exposed to Cadmium," Elinder includes smoking habits, levels, and analytical procedures. Figure 1 "Cadmium in Blood" compares smokers and nonsmokers for ten international cities. Figure 2 "Median blood cadmium levels among males and females in different smoking categories" is a bar graph comparing blood cadmium and smoking consumption habits.

In Cadmium In The Human Environment: Toxicity And Carcinogenicity Lyon, France IARC 1992 (Volume 118) Alessio presents data comparing cadmium levels in blood for smokers and nonsmokers in "Definition of reference values for Cu-B and Cd-U: methodological aspects and preliminary results" (page 93-100). Other chapters present reviews of human exposure and biological monitoring.

In Cadmium In The Environment (Nriagu, Jerome O., Editor New York John Wiley & Sons 1980) Cherry summarizes cadmium levels in human blood (Figure 4.16) and has organized this table to include the mean for normal subjects versus the test subjects with extensive footnotes to describe the normal and test subjects.

In Trace elements in health and disease. (Aitio, Antero et. al., editors. Cambridge : Royal Society of Chemistry, 1991) Heinzow has authored "Heavy Metals in the General Population: Trend Evaluation and Interrelation with Trace Elements." Figure 3 "Influence of smoking on blood cadmium levels in adults" graphs the frequency of a given range of blood cadmium levels as a function of smoking or nonsmoking.

Additionally, the Medline file was searched for articles reporting cadmium in human blood using Medline subject subheadings for smoking/blood or smoking/metabolism or smoking/adverse effects in English. A set of 123 matches was retrieved and the bibliographies are attached in Table 2. Those in bold appear to be very relevant and have been ordered.

A copy of the bibliographic information for each item is attached. Copies of the complete papers can be ordered in the library.

Attachment

Kathy Mitchell